

## MOD – MODESTO ATCT FACILITY UPGRADE

## SECTION 01 11 00 SUMMARY OF WORK

## PART 1 - GENERAL

## 1.1 SEQUENCE OF WORK

Upon contract award, the successful bidder shall submit a preliminary construction progress chart within 10 calendar days and Contractor quality control plan within 15 calendar days. In addition, NOTICE TO PROCEED shall not be issued until the following conditions are satisfied:

- A. Government Approval of Preliminary Construction Schedule.
- B. Government Approval of Contractor's Quality Control Plan.
- C. Government Approval of Contractor's Safety and Accident Prevention Program. Completion of FAA Order 3900.57, FAA Preconstruction and Maintenance Projects Safety and Health Checklist.

## 1.2 SCOPE OF WORK

Specifications with the referenced standards, and drawings, specified in the Contract Documents, cover the requirements of the Federal Aviation Administration, hereinafter referred to as the Government or FAA, for all work associated with the modernization of the airport traffic control tower at the Modesto Municipal Airport (MOD) located in Modesto, California. This work includes, but is not limited to:

Division 2 Demolition – The scope of demolition work includes removal of concrete raised floor pads in the 5<sup>th</sup> floor mechanical room, and removal of two (2) sections of the concrete walkway at the ATCT entrance and at the parking lot. The tree will be cut off at ground level, and stump grinding will remove the base to 6" below the surface grade. The root ball will remain. The hatch on the 5<sup>th</sup> level catwalk will be removed and replaced. The railing on the 5<sup>th</sup> level catwalk will be removed and replaced. Numerous lights, electrical panels, conduits and wiring will be removed in association with the lighting and power facility upgrades. The abandoned fuse boxes in the 3<sup>rd</sup> floor kitchen and the abandoned transformer in the EG 1<sup>st</sup> floor room will be removed.

Division 2 Hazardous materials – The Modesto ACM and Lead Paint Reports are included in these specifications. Asbestos, lead, and PCB's shall be abated, where necessary. As indicated in the scope of work and drawings, the existing Asbestos Containing Material (ACM) under the carpet on the fourth floor should not be disturbed during the modernization work. The vinyl tiles and underlying mastic will be encapsulated. Carpet will be installed over the encapsulated ACM vinyl tile. Residual carpet glue will be removed using an approved carpet adhesive product.

ACM and Lead paint are present at other locations. Where necessary to perform the work, these shall be abated in accordance with federal, State of California, and local requirements.

Some of the light fixtures, electrical equipment, and removed materials contain hazardous materials and must be handled and disposed of in accordance with federal, State of California, and local requirements.

Division 3 Concrete – The scope of concrete work includes installation of a modification of the existing concrete walkway to install ADA compliant ramps at the parking lot and at the building entrance and a

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topping slab at the building entrance. Additional concrete work will be required for the new exterior pad mounted fuse cabinet and transformer assembly. Several locations will require concrete repairs.

Division 5 Metal Fabrications, Stairs, and Handrails – The scope of metal fabrication work includes stair modification to the stairways steps and handrails; replacement of the 5<sup>th</sup> level perimeter catwalk handrail; the installation of a ladder-up device on the existing roof ladder; installation of a roof level hatch railing and gate; and installation of a step with railing on the roof. Sections of plate will be added to both sides of the cab roof entry frame to prevent stepping on to the exposed cab ceiling tiles. The gaskets will be replaced on the 5<sup>th</sup> level perimeter catwalk access hatch and on the roof hatch. Design, construct, and test fall arrest anchors at the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> floor landings and at four (4) locations at the roof level. Floor grating and toe board will be installed inside the cable shaft rooms on the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> floors. A safety ladder climbing system will be installed on the existing 35' ladder located in the 1<sup>st</sup> floor utility chase room. A replacement stand shall be provided for the existing hot water tank in the 4<sup>th</sup> floor mechanical room.

Adequate ventilation of the ATCT is required during welding operations. The Contractor may use mechanical connections in lieu of welded connections inside the ATCT.

Contractor is required to obtain a "Written Work Permit" for hot welding in the ATCT from the Resident Engineer and FAA Safety and Environmental Compliance Manager (SECM) Representative.

Division 6 Interior Architectural Wood Work and Seismic Tie-Down Bracing – The scope of work for the interior wood work in the cab includes the following: replace damaged trim on bottom edge of the console; provide a map slot behind the existing book case next to the podium, install cover over spiral stair; replace hardware on the south side console with recessed door pulls; replace ten (10) perimeter grill vents and trim; provide new drawer and cabinet covers under the sink; and replace the swing door.

The scope of seismic tie-down bracing includes: tie-down of the water tank and replacement cabinet in the 1<sup>st</sup> floor janitor room; tie-down of the cabinets in the 1<sup>st</sup> floor storage room; tie-down of the cabinets in the 3<sup>rd</sup> floor Ops break room and storage room, and tie-down of the lockers in the 5<sup>th</sup> floor vestibule.

Division 7 Thermal and Moisture Protection – The scope of thermal and moisture protection includes repair and patching sections of the roof associated with the installation of the handrail and tie-down points. Firestopping of conduits either removed or installed as necessary to maintain the fire rating. Existing deteriorated joint caulking shall be removed and replaced. Rust areas and deteriorated seams will be cleaned and sealed prior to painting.

At the tower exterior vertical windows, the old caulking shall be removed and replaced. Remove and reseal the caulking around the exterior window frames.

At the exterior metal perimeter panel joints located at the cab level below the windows, and at the exterior joint below the 2<sup>nd</sup> floor level, a new sealant joint cover shall be installed and caulked to cover the existing metal panel and metal framing member.

Division 8 Openings – The scope of opening work including replacement of the building entrance storefront; replacement of the 5<sup>th</sup> floor perimeter catwalk access door; replacement of sections of exterior sealant at cab and tower windows; installation of a louver above the door to the 3<sup>rd</sup> floor kitchen; installation of louver trim in the cab spiral stair; replacement of gaskets for the 5<sup>th</sup> floor access door and

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roof hatch; and relocation of the two (2) magnetic door holders in the 4<sup>th</sup> floor stairwell to provide a wider opening.

Division 9 Finishes – The scope of finish work includes drywall, ceiling panels, VAT and carpet tile, exterior and interior painting, and sealing floors. The finish work is shown on the floor plans and in the finish schedule on Drawing A114.

The scope of finish work is described below.

The drywall work includes trimming the opening with studs and installing a gypsum board ceiling to cover the existing ceiling hatch opening on the 5<sup>th</sup> floor vestibule level per drawing A112 detail B.

Replacement of all the acoustical ceiling panels in the cab.

Sealing existing floor hatches, leveling the floor and installing vinyl tile and cove base in the 5<sup>th</sup> floor vestibule area. Install floor transition strips at the door openings.

Cleaning the carpet tile and cove base in the 3<sup>rd</sup> floor Ops Break room and the adjacent 3<sup>rd</sup> floor Storage room.

Replacement of the carpet tile and cove base in the 4<sup>th</sup> floor break and recorder rooms

Replacement of the cove base in the 1<sup>st</sup> floor lobby and 1<sup>st</sup> floor stairwell vestibule.

The exterior painting includes cleaning, sealing and painting the exterior of the entire tower, propane tank, CMU wall enclosure and engine generator piping. The exterior tower painting requires a fall protection plan. The exterior painting includes the parking stalls and ADA compliant stripes and symbol as listed in Division 32 Site Improvements.

The interior painting includes cleaning and painting the walls, ceilings, door, railings, and floors as shown on the floor plans. Interior painting shall be coordinated with other facility modifications and is required to touch up areas as a result of demolition and removal of panels, conduit, lights, and other items as required. The Contractor is responsible for removing and replacing furnishing as required to complete the painting and other finish work.

The specific areas that will not be painted include the following: the 1<sup>st</sup> floor telephone room, janitor room, storage room, engine generator room, electrical room, and HVAC room; the 2<sup>nd</sup> floor office; the 3<sup>rd</sup> floor electronic rack area; the utility and cable shafts; the 4<sup>th</sup> floor mechanical and storage room; portions of the 5<sup>th</sup> floor junction room; and the cab level area except the trim on the replacement grill vents.

The interior floors will be painted in the following areas: in the 1<sup>st</sup> floor HVAC/Boiler room; in the 2<sup>nd</sup> floor storage rooms 1 and 2; and in the 5<sup>th</sup> floor junction room.

The concrete floors will be seal coated in the following areas: in the 1<sup>st</sup> floor engine generator, storage, janitor, and electrical rooms; and in the 4<sup>th</sup> floor mechanical and storage rooms.

Division 10 Specialties (Signage, Louvers, Vents, Toilet Accessories) – The scope of specialties includes signs, louvers and grill vents, and kitchen\bathroom fixtures.

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The scope of Specialties work is outlined below:

Installation of the exterior ADA compliant sign and post.

Installation of interior signage at various locations.

Installation of a louver in the existing opening above the 3<sup>rd</sup> floor Ops break room.

Replacement of ten (10) existing grill vents in the cab level.

Installation of gab bars in the 1<sup>st</sup> and 5<sup>th</sup> floor bathrooms.

Division 12 Furnishings – The scope of furnishing work includes replacement of the existing transparent window shades in the cab. And installation of a new wall mounted cabinet above the water closet in the 5<sup>th</sup> floor bathroom.

Division 22 Plumbing – The scope of work for plumbing includes installation vent piping for the existing cab level sink and modification of the associated copper piping system current installed on the 4<sup>th</sup> level mechanical room. Additional plumbing work will be performed in association with the replacement of the 1<sup>st</sup> floor janitor room sink and faucet, the 3<sup>rd</sup> floor Ops break room sink and faucet, the 5<sup>th</sup> floor bathroom water closet, and the cab level counter sink.

Plumbing Fixture replacement includes:

Replacement of the janitor sink and faucet in the 1<sup>st</sup> floor janitor room.

Replacement of the sink and faucet in the 3<sup>rd</sup> Ops Break room.

Replacement of the existing water closet with an ADA compliant water closet in the 5<sup>th</sup> floor bathroom

Replacement of the sink ad faucet in the Cab Level.

Division 23 Heating Ventilation and Duct Cleaning - The scope of work for heating and ventilation includes the replacement of the exhaust fan with timer, in the 1<sup>st</sup> floor bathroom. The replacement of the exhaust fan with timer, and the wall heater with timer, in the 5<sup>TH</sup> floor bathroom. The replacement of the deteriorated duct insulation in the 5<sup>th</sup> floor junction room. The installation of an exterior hood over the existing 1<sup>st</sup> floor exhaust vent. The entire HVAC duct system will be cleaned.

Division 26 Electrical – The existing electrical service at the ATCT facility is 208V/120V, 3phase, 4 wire provided by three pole mounted 25KVA transformers. Permanent backup power is provided by a 50KW/62.5KVA 208/120V Marathon Electric engine generator connected through an ASCO 260A automatic transfer switch/maintenance bypass switch. Due to the age of the facility, much of the current electrical distribution system is not in compliance with current FAA standards and requires replacement.

### Electrical Scope Items:

Demolish existing panelboards (unless marked to remain), service entrance conductors, service disconnects, wireways, feeders, feeder raceways, abandoned enclosed circuit breakers, and other equipment shown in the construction drawings for demolition..

Provide new electrical distribution system in the air traffic control tower. This includes new panelboards,

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circuit breakers, conduit, wire, junction boxes, disconnects, terminations, testing, service conductors, TVSS's, and demolition of the existing electrical distribution system per the construction drawings. Provide setting and testing of solid state/adjustable circuit breakers by certified manufacturer's representative.

Paint new conduits in finished areas to match new paint colors. This does not apply to mechanical and electrical only rooms.

Demolish existing VOR 2400V distribution equipment within the ATCT and provide new 2400V transformer, 5KV fuse cabinet, equipment rack, disconnect, and TVSS on exterior of ATCT. Extend existing EES around new VOR feeder equipment. Re-route portion of 2400V ductbank around existing communication handhole and provide new 5KV feeders to existing handhole for splicing to existing VOR conductors as shown in the construction drawings.

Demolish light fixtures, light switches, lighting raceways and wire shown in the construction documents. Provide new lighting fixtures, raceways, mounting hardware, wire, switches, etc., necessary to energize new lighting fixtures. Emergency light fixtures shall be added at locations shown and exterior security lighting shall be provided as shown in the construction documents. Contractor shall provide all new lighting and switch circuits necessary to energize new lighting fixtures, and mark the construction drawings to reflect the as built branch and switch wiring. Fixture wiring and raceways shall comply with NEC and FAA-C-1217f.

Provide Communication junction boxes and conduits, on the third and fourth floors, for FAA re-routing of existing open strung CAT5 and control cables. Contractor shall install the conduits/j-boxes and the FAA will coordinate the relocation of the CAT5 cables.

Provide roof mounted antenna junction boxes at each existing roof location. Contractor will provide Crouse Hinds boxes to replace existing. The FAA will coordinate relocation of antenna cables during construction, while the Contractor installs the new junction boxes.

Provide equipment labeling and conductor labeling to reflect the new panel designations and new distribution system configuration. This involves not only the new conductors/equipment installed under this contract, but also existing equipment and branch conductors that need labels updated to reflect new conditions.

Provide exterior GFCI receptacle near existing fuel tank. Provide power service, wall penetration, in-use exterior cover, wall seals, and terminations.

Coordinate with mechanical contractor for new equipment installed, and provide electrical services for all new mechanical equipment installed under this contract. Provide circuit breakers, conduit, wire, j-boxes, and local disconnects/controls as necessary to energize new mechanical equipment.

Arc Flash labeling will be based on as-built conditions after construction and will be applied to the panelboards and equipment by the FAA. Contractor shall provide accurate feeder lengths in as-built information for the FAA to finalize ATCT electrical studies. If the Contractor substitutes different distribution equipment than is identified in the contract documents, the Contractor shall provide updated fault, coordination, and Arc Flash studies to the FAA for review and approval. Studies shall be performed by a registered engineer with a minimum of 5 years experience in the applicable electrical studies.

Provide 40hrs of electrician's labor time for miscellaneous circuit tracing and exploration of existing conditions not shown on the construction drawings. This time will be used to trace existing conduit routes, identify unknown electrical loads, and remove demolished conductors not shown in the construction drawings, or known to the FAA. The RE shall monitor and approve this time on a case by case basis.

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Provide construction phasing plans to identify temporary power requirements, each individual outage duration, and critical loads needing backup. Electrical cutovers will be handled during the closed, nighttime hours of the facility to minimize impacts to the NAS and shall be scheduled ahead of time with the RE and FAA personnel. Contractor shall provide temporary diesel generators (sized per the construction documents) to provide prime power to the facilities (ATCT and VOR) during service entrance equipment and cable work. The permanently installed FAA's backup generator will be considered backup power to the contractor's "Prime Power" temporary diesel generator. Contractor shall provide generators, fuel, maintenance, and full time monitoring of generators during generator operation. Contractor shall provide all temporary cables, terminations, penetrations, and raceways to connect temporary engine generators.

Division 31 Earthwork – The scope of earth related work includes underground utility locate, trenching for the exterior pad mounted fuse cabinet and transformer assembly associated with the re-routing of the service to the VOR. To provide improved parking lot drainage, shallow swales will be established in the landscaped area on the west side of the parking lot. Some earthwork and sod are required along the concrete walkway.

Division 32 Exterior Improvements – The scope of exterior improvements includes cleaning the parking lot, crack sealing the asphalt pavement, and installing an asphalt emulsion slurry seal coat. Following the asphalt work, parking spaces and ADA compliant pavement stripes and markings will be applied. In conjunction with the electrical work associated with the VOR 2400V service modifications, bollards will be installed next to the exterior mounted fuse cabinet and transformer assembly.

### 1.3 INTENT OF SPECIFICATIONS

A. This specification identifies labor and equipment to perform the work required to construct or modernize the facility. All material not specifically indicated as furnished by the Government, as listed shall be furnished by the Contractor. All work performed and all materials and equipment used shall be subject to approval by the Contracting Officer (CO). This shall include but not be limited to construction testing, inspection, scheduling, reporting, and submittals.

B. In accordance with AMS, any references to brand names within this solicitation are not intended to restrict bidders to these products or materials, except where specifically noted. Bidders are encouraged to propose equal products made by other manufacturers which meet the salient characteristics described herein. However, in some instances, proprietary specification of products or materials will be mandatory in order to comply with maintenance, spare parts support, controls connectivity, EMCS coordination, central station monitoring, equipment compatibility, etc.

C. Required products:

1. As indicated in the Contract Documents

### 1.4 TITLES

Titles to division and sections of the specifications and notes and titles on drawings referring to subcontractors, division of work by trade, or type of work, are introduced merely for convenience in reading the specifications and drawings and do not imply any separate contractual arrangements of work assignments. Such separations into titled divisions and sections shall not operate to make the Government an arbiter to establish subcontract limits between the Contractor and

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subcontractors, or between the subcontractors themselves.

### 1.5 CONTRACT DOCUMENTS

A. As listed in Section 00004 and Attachment "A" of Part III - Section J, the drawings for the General, Civil, Architectural, Structural, Plumbing, Mechanical, and Electrical, form a part of the construction requirements for this project. One set of "D-size," blue-line, contract drawings and one copy of the specifications shall be furnished to the Contractor without charge, except applicable publications incorporated into the technical specifications by reference. The demolition, construction, and associated work to build this facility shall be in accordance with the lines and grades shown on the drawings.

B. The Contractor shall not use dimensions scaled from drawings. All dimensions shown on the drawings shall be verified by the Contractor by actual measurements in the field. Any discrepancies between the drawings and specifications and the existing conditions shall be referred to the Contracting Officer before any work affected is performed.

C. Omissions: Omissions from the drawings or specifications, or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, or which are specified by the governing codes and regular construction practices, shall not relieve the Contractor from performing such omitted or misdescribed details of the work but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.

D. Drawing Review: The Contractor shall check drawings immediately upon their receipt and shall promptly notify the Contracting Officer of any discrepancies. Figures marked on drawings shall be followed. Scale measurements shall be used only if approved by the Resident Engineer. The Contractor shall compare all drawings and verify the figures before laying out the work and shall be responsible for any errors that might have been avoided thereby.

### 1.6 PRECEDENCE OF CONTRACT DOCUMENTS

A. In the event of a difference between the following contract provisions, the order of precedence to determine which provision shall govern is:

1. Project Specifications
2. Project Drawings as listed in Section 00004

B. Any discrepancies between the contract provisions, and the specifications and contract drawings shall be referred to the Contracting Officer.

### 1.7 CONTRACTING OFFICER

The term "Contracting Officer" (CO), as used herein denotes the person designated to act on behalf of the Government in the performance of this contract. Where reference is made to the "Federal Aviation Administration" (FAA), "Resident Engineer" (RE), "Contracting Officer's Representative" (COR), or the like, this shall mean the Contracting Officer or the Contracting Officer's authorized representative. Letters of delegation from the contracting officer outlining the authority of each representative will be issued to the R.E./COR and the contractor.

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### 1.8 CONTRACTOR SUPERINTENDENCE

The Contractor shall at all times during performance of this contract and until the work is completed and accepted, directly superintend the work and have on site a competent superintendent with the authority to act for the Contractor.

### 1.9 VALUE ENGINEERING

The Federal Aviation Administration encourages all offerors to utilize the Value Engineering methodology and functional analysis techniques. These techniques will most often result in a quality and cost effective product.

### 1.10 PHYSICAL DATA

A. Data and information furnished or referred to below is for the Contractor's information. The Government will not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

B. Weather Conditions: Each bidder shall be satisfied before submitting their bid as to the hazards likely to arise from weather conditions. Complete weather records and reports may be obtained from any National Weather Service Office.

C. Transportation Facilities: Each bidder, before submitting their bid, shall make an investigation of the conditions of existing public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress at the job site. The unavailability of transportation facilities or limitations thereon shall not become a basis for claims for damages or extension of time for completion of the work.

PART 2 - PRODUCTS NOT USED

PART 3 - EXECUTION NOT USED

END OF SECTION 01 11 00